

**What is claimed is ;**

5 1. A method for multi-job scanning used in an optical scanning device, the  
optical scanning device having an image-grabbing component driven in a  
scanning process between a scanning starting position and a scanning  
terminal position, the method comprising:  
10 configuring a plurality of jobs in the scanning process;  
15 re-allocating scanning scopes of the jobs into a plurality of scanning  
areas, wherein each of the scanning areas corresponds to one of  
following situations: covering one of the scanning scopes, covering  
part of one of the scanning scopes, and covering multiple ones or  
parts of the scanning scopes;  
20 determining a scanning order according to a distance from each of the  
scanning areas to the scanning starting position;  
25 configuring a resolution of each of the scanning areas as a highest one  
of resolution requests of the scanning scopes overlapping with the  
each of the scanning areas; and  
scanning each of the scanning areas by the image-grabbing component  
according to the scanning order and the configured resolution,  
wherein the image-grabbing component moves directly to a next  
scanning area after finishing a scanning area.

20 2. The method of claim 1, wherein the image-grabbing component is driven  
by a variable-speed stepping motor.

25 3. The method of claim 2, wherein the scanning comprises accelerating the  
variable-speed stepping motor in non-scanning areas.

30 4. The method of claim 2, wherein the scanning comprises adjusting a  
speed of the stepping motor according to image type, resolution and  
scanning scope of the each of the scanning areas.

30 5. The method of claim 4, wherein the image type comprises one of the  
following: color, grayscale, and black and white.

6. The method of claim 1, wherein the re-allocating comprises combining the scanning scopes which overlap in a moving direction of the image-grabbing component to form one of the scanning areas, and isolating the scanning scope which does not overlap with any other scanning scope in the moving direction of the image-grabbing component to form another one of the scanning areas.

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7. The method of claim 1, wherein the re-allocating comprises isolating each overlapping portion of the scanning scopes which overlap in a moving direction of the image-grabbing component to form one of the scanning areas, and isolating each remaining portion of the overlapping scanning scopes to form another one of the scanning areas.

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8. The method of claim 1, wherein the scanning order is determined from the near to the distant according to the distance from the each of the scanning areas to the scanning starting position.

15 9. The method of claim 1, further comprising:

returning the image-grabbing component to the scanning starting position after the scanning.

10. A method for multi-job scanning used in an optical scanning device, the optical scanning device having an image-grabbing component driven in a scanning process between a scanning starting position and a scanning terminal position, the method comprising:

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configuring a plurality of scanning areas in the scanning process; determining a scanning order according to a distance from each of the scanning areas to the scanning starting position; and

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scanning each of the scanning areas by the image-grabbing component according to the scanning order and a resolution request of the each of the scanning areas, wherein the image-grabbing component moves directly to a next scanning area after finishing a scanning area.

11. The method of claim 10, wherein the scanning order is determined from the near to the distant according to the distance from the each of the scanning areas to the scanning starting position.

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12. The method of claim 10, further comprising:

returning the image-grabbing component to the scanning starting position after the scanning.

13. The method of claim 10, wherein the image-grabbing component is driven by a variable-speed stepping motor.

14. The method of claim 13, wherein the scanning comprises accelerating the variable-speed stepping motor in non-scanning areas.

15. The method of claim 13, wherein the scanning comprises adjusting a speed of the stepping motor according to image type, resolution and scanning scope of the each of the scanning areas.

16. The method of claim 15, wherein the image type comprises one of the following: color, grayscale, and black and white.

17. A method for multi-job scanning used in an optical scanning device, the optical scanning device having an image-grabbing component driven in a scanning process between a scanning starting position and a scanning terminal position, the method comprising:

configuring a plurality of scanning areas in the scanning process;

precluding the scanning areas which overlap in a moving direction of the image-grabbing component except the scanning area closest to the scanning starting position, and determining a first order from the near to the distant for the remaining scanning areas;

determining a second order from the distant to the near for the precluded scanning areas according to distances from rear edges of the precluded scanning areas to the scanning starting position; and

scanning each of the scanning areas by the image-grabbing component according to a resolution request of the each of the scanning areas and the first and second orders, wherein the image-grabbing component moves directly to a next scanning area after finishing a scanning area.

18. The method of claim 17, wherein the image-grabbing component is driven by a variable-speed stepping motor.

19. The method of claim 18, wherein the scanning comprises accelerating the variable-speed stepping motor in non-scanning areas.

20. The method of claim 18, wherein the scanning comprises adjusting a speed of the stepping motor according to image type, resolution and scanning scope of the each of the scanning areas.

21. The method of claim 20, wherein the image type comprises one of the following: color, grayscale, and black and white.

22. The method of claim 17, wherein the scanning comprises scanning the scanning areas included in the second order from the rear edges to front edges.